



OPERATION INSTRUCTIONS FOR SPACESAVER POWER ASSIST CONTROLS

SYSTEM PREPARED FOR: _____

SPACESAVER ORDER NUMBER: _____

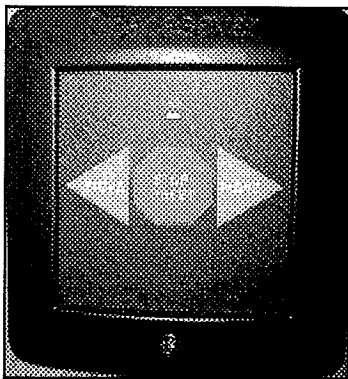
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<input type="checkbox"/> ONE TOUCH - MANUAL RESET	2 A/B	<input type="checkbox"/> AISLE LIGHTS	3
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POWER ASSIST ELECTRIC CONTROL OPERATION

Spacesaver electric systems may include all or some of the many Spacesaver safety devices offered for operator protection. The intent here is to describe the proper use of the electric controls. This document, coupled with your on site training, will provide the means for the safe, efficient and non-abusive use of the system. Subsequent training of new personnel is the responsibility of the area supervisor. This overview of operation and safety features may include information about options not incorporated into your unique Spacesaver System.

Your role in maintaining the system:

- Bring any problem observed to the attention of a supervisor at once.
- Keep all aisles clear of obstructions.



SWITCH FUNCTIONS:

The **STOP/RESET** button will soft - stop carriage travel.

The **STOP/RESET** button will reset the carriage after a safety fault and will cancel a locked aisle.

The **DIRECTIONAL PUSHBUTTON ARROWS** will initiate carriage movement in the direction of the arrow.

- Keep the tracks free of any small debris.

1. Starting the System:

- 1.1 These controls are ready for operation any time the 110 V.A.C. power is turned on. *See sections #8 & #9 for lock Information.*
- 1.2 A red light above a **STOP/RESET** button will blink at the controls on both sides of the open aisle.

2. Selecting an Aisle:

- 2.1 Step up to the system and check the open aisle to confirm that it is unoccupied and free of material on the floor. Press a **STOP/RESET** button on either side of the open aisle to cancel the locked condition.
- 2.2 Move to the desired aisle/carriage and push the **DIRECTIONAL PUSHBUTTON ARROW** in the direction of desired movement. Upon hearing a brief beep, release the button and movement will continue until the aisle is fully open.

NOTE: *You have 15 seconds from the time the STOP/RESET button is pressed and one of the DIRECTIONAL PUSHBUTTONS is pressed. If a new aisle is not selected within 15 seconds the open aisle will return to a locked condition.*

3. Stopping Carriage Travel:

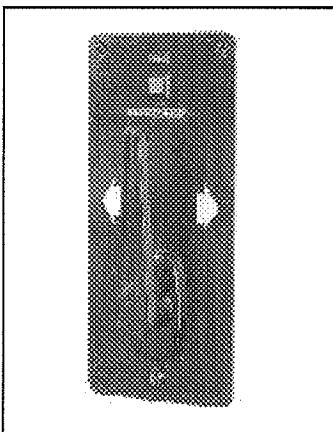
- 3.1 All carriage movement can be stopped at any time by pressing the **STOP/RESET** button on any control within the system.
- 3.2 Upon stopping, the aisle that was opening will enter a locked condition, carriage movement cannot be re-started until an active **STOP/RESET** button is pressed. See Section #2 - "Selecting an Aisle."

OPTIONAL POWER ASSIST ELECTRIC CONTROL OPERATION

Spacesaver electric systems may include all or some of the many Spacesaver safety devices offered for operator protection. The intent here is to describe the proper use of the electric controls. This document, coupled with your on site training, will provide the means for the safe, efficient and non-abusive use of the system. Subsequent training of new personnel is the responsibility of the area supervisor. This overview of operation and safety features may include information about options not incorporated into your unique Spacesaver System.

Your role in maintaining the system:

- Bring any problem observed to the attention of a supervisor at once.
- Keep all aisles clear of obstructions.
- Keep the tracks free of any small debris.



SWITCH FUNCTIONS:

The **RESET** button will stop carriage travel.

The **RESET** button will reset the carriage after a safety fault and will cancel a locked aisle.

The **CONTROL HANDLE** will initiate carriage movement in either direction and stop carriage travel.

1. Starting the System:

- 1.1 These controls are ready for operation anytime the 110 V.A.C. power is turned on. See 8 & 9 for lock Information.
- 1.2 A red light above a **RESET** button will blink at the controls on both sides of the open aisle.

2. Selecting an Aisle:

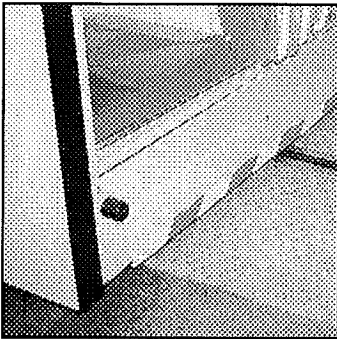
- 2.1 Step up to the system and check the open aisle to confirm that it is unoccupied and free of material on the floor. Press a **RESET** button on either side of the open aisle to cancel the locked condition.
- 2.2 Move to the desired aisle/carriage and gently rotate the **CONTROL HANDLE** in the direction you wish the carriage to move. Upon hearing a brief beep, release the handle and movement will continue until the aisle is fully open.

NOTE: *You have 15 seconds from the time the RESET button is pressed and the CARRIAGE CONTROL HANDLE is rotated. If a new aisle is not selected within 15 seconds the open aisle will return to a locked condition.*

3. Stopping Carriage Travel:

- 3.1 All carriage movement can be stopped at any time by rotating any **CONTROL HANDLE** in either direction.
- 3.2 All carriage movement can be stopped at any time by pressing any **RESET** button in the system.
- 3.3 Upon stopping, the aisle that was opening will enter a locked aisle condition, carriage movement cannot be re-started until an active **RESET** button is pressed. See Section 2 -- "Selecting an Aisle".

NOTE: **EXCEPTION** *A second "same direction actuation" of the control handle from which movement was initiated will not stop system movement until a 2 second time period has passed.*



4. Using the Electro - Mechanical Safety Sweep:

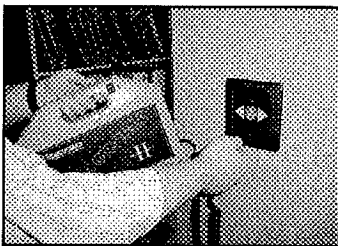
- 4.1 If carriage movement should begin while you are in the aisle, it can be stopped abruptly by applying pressure to the safety sweep located along the full length of each carriage just above floor level. The safety sweep can also help prevent damage to media left laying in the aisle.

CAUTION!: Remember that sweep activation must be done from floor level. Therefore, never climb on the shelves!

- 4.2 When a safety sweep has been activated during carriage travel the red light just above the **RESET** button will begin to blink and all system function will cease. A press of the **RESET** button will turn the blinking light to steady.
- 4.3 If it is not possible to remove the obstruction in the aisle the following procedure can be used. Press a **RESET** button under the blinking red light. The red light will stop blinking and turn steady. Rotate the control handle away from the safety locked aisle and release it when any system movement is observed. The safety locked aisle will fully open, allowing entry and removal of the obstruction. Normal operation has now been restored.

5. Using the Optional Dual Electro - Mechanical Sweep:

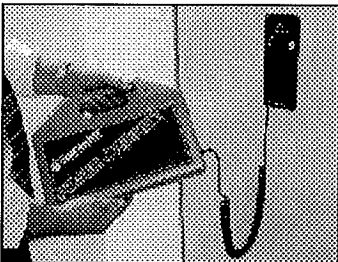
- 5.1 Your system may be equipped with a second full length safety sweep. Please see Section 4 - "Using the Electro - Mechanical Safety Sweep" for details regarding its use.



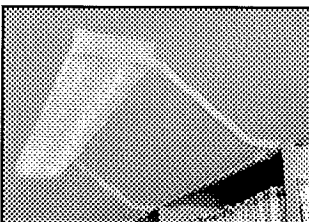
6. Using the Optional Power Override Pack:

- 6.1 This feature provides a temporary means for operating your system during a power outage.
- 6.2 The unit plugs to a receptacle near the bottom of the **CONTROL**. Slow movement of one carriage at a time, in either direction, is achieved by pressing a rocker switch on the power pack. A warning beeper will sound to alert personnel that an aisle is being closed.

CAUTION!: With power off to the system, the safety devices will not operate and the limit switches will not stop carriage travel. Extreme care must be exercised while using this unit.



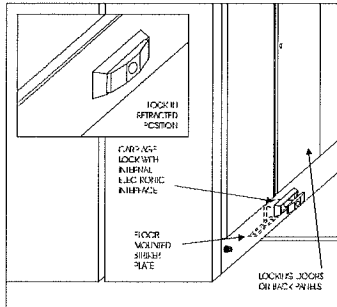
- 6.3 If your power override unit is the rechargeable type it should be plugged into a 110 volt outlet while not in use. The L.E.D.'s will help determine the units charged status. Both L.E.D.'s on indicates that the unit is fully charged. One L.E.D. on indicates that the unit is charging. If both L.E.D.'s are on, but the unit fails to work, check the condition of the internal fuse.
- 6.4 If your power override unit is of the battery type the batteries should be changed every 12 months or more frequently if used often. Use 16 D size batteries.



7. Using The Optional Aisle Lights:

- 7.1 Use of this feature requires no conscious effort on your part. The lights will come on when the aisle is opened.
- 7.2 The lights will go out when a reset button is pressed in preparation for the selection of a new aisle.

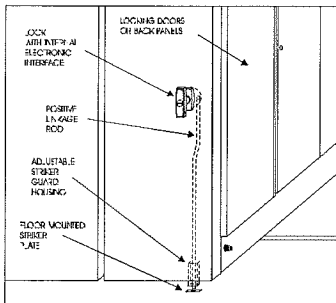
- 7.3 In the interest of energy conservation, the lights may be turned off by pressing the reset button upon exiting the aisle.
- 7.4 The lights at an open aisle may be turned back on by turning either control handle away from the open aisle.



- This feature provides media security by electronically deactivating the system while at the same time mechanically locking the system.
- 8.2 The lock will be found near floor level on the outside of the first or last carriage.
 - 8.3 A special barrel style key is required to release the lock handle from its housing. Once the lock handle pops out turn it 180° to open and snap the handle back into its housing. Failure to do this may cause damage to the lock, floor covering or carriage.
 - 8.4 The key is also required for re-locking. Once the lock handle pops out, turn it 180° to lock and snap the handle back into its housing.
 - 8.5 The key should be removed in both the locked and unlocked positions. The key should be kept by the area supervisor.
 - 8.6 If the lock is located on carriage one, move all carriages closed to the right and lock to disable any system operation.
 - 8.7 If the lock is located on the last carriage, move all carriages closed to the left and lock to disable any system operation.

Note: 1.3 Software and above: The lock may be installed on any carriage in the system. Move the lockable carriage completely to the left or right and engage the lock. Carriages not packed to the left or right can be operated normally.

9. Using The Optional Waist High Lock:



- 9.1 This feature provides extra media security by electronically deactivating the system while at the same time mechanically locking the system.
- 9.2 It is conveniently located on the front of the first or last carriage at about waist level. The key is required for locking and unlocking. The key should be removed when not in use.
- 9.3 Rotate the polished chrome handle 1/4 turn to engage or disengage the cam latch mechanism with the striker plate in the floor.
- 9.4 Rotate the key 1/2 turn to lock or unlock. The key should be kept by an area supervisor when not in use.
- 9.5 If the lock is located on carriage one, move all carriages closed to the right and lock to disable any system operation.
- 9.6 If the lock is located on the last carriage, move all carriages closed to the left and lock to disable any system operation.

Note: 1.3 Software and above: The lock may be installed on any carriage in the system. Move the lockable carriage completely to the left or right and engage the lock. Carriages not packed to the left or right can be operated normally.

RECOMMENDED LOADING INSTRUCTIONS:

- Do not fully load one side of double-entry shelving without counterbalance weight on the other side.
- Begin loading at the lowest shelf.
- At no time should the weight differential from one side to the other exceed 50 percent.

Spacesaver Corporation

a division of KI

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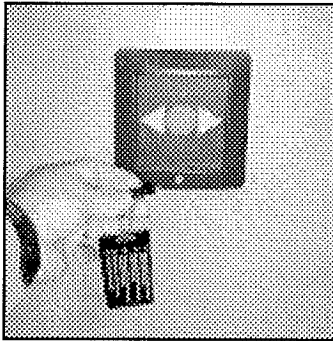
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ATTN: AREA SUPERVISOR ONLY

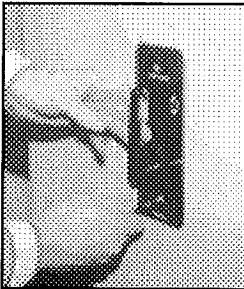
OPERATION INSTRUCTIONS

POWER ASSIST SAFETY OVERRIDE KEY



Extreme caution must be used while operating under this condition. This method of operation should only be used when the problem causing the carriage shut-down cannot be corrected by the operator. Spacesaver Area Contractor service personnel should be called at once to correct the problem. This device should be used only by supervisors and service personnel.

Using the Safety Override Key:



1. The safety override key will provide restricted use of the system when normal operation cannot be restored after a safety sweep fault. See Sections 6 & 7 in the Operation Instructions Booklet for recovery instructions not requiring the use of this key. If it becomes necessary to close a faulted aisle the override key will be required.
2. While operating a carriage using the safety override key it will travel at a reduced rate of speed, a warning beeper will sound and either the pushbutton or the control handle must be held constantly during carriage travel. The limit switches will stop travel when carriages nest together.
3. To close a faulted aisle do the following:
 - A) Step up to a carriage on either side of the faulted aisle. They will be displaying a blinking red light just above the RESET button. A press of the RESET button will only turn the blinking light to steady.
 - B) Insert the safety override key into the receptacle.
 - C) You now have 40 seconds to complete the carriage move. If time expires before the move is complete you must remove and re-insert the key to purchase another 40 seconds.
 - D) A move of any carriage in the system, during a safety fault, will require that a safety override key be inserted into the carriage during the move.
 - E) Once the safety fault has been cleared the safety override key must be removed. Normal system operation is not possible while the key is inserted.
 - F) Once the faulted aisle is closed other aisles may be selected. The faulted aisle may be opened without the use of the safety override key. However, the safety override key is required to reclose the faulted aisle.

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